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Review of: Charles R. Bennett, Risks in the Environment: How to Assess Them

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Book Reviews

Charles R. Bennett, **Risks in the Environment: How to Assess Them** (Burloak Publications 1996). Appendices, references for the appendices, prologue. ISBN 0-9680438-0-1 [305 pp. Paper $23.95. 277 Belvenia Rd., Burlington, Ontario.]

This book addresses statistical risk factors in the environment so as to be understood by general audiences. He points out that the primary difficulty in discussing such factors is that debate is usually emotional rather than intellectual. Many studies have shown that public risk perceptions are usually inaccurate, even among the educated. Another obstacle to objective risk assessment is that many form opinions by talking with others, equally ignorant. Also, too few people are "numerate"; many are simply unable to understand statistics and risk factors. According to Bennett, people simplify to avoid the mental overload that complexities produce and do not read deeply enough. He has thus designed this book to minimize the intellectual effort required.

He points out that certain words or phrases are used as *icons* that acquire their own "mythology". Such icons become devoid of their "actual, accurate" meaning and make dissemination of accurate information more difficult.[1] Another part of the problem is that probabilities vary according to constantly changing information. Bennett believes we must teach probability theory in public schools if the electorate to make informed, rather than overly emotional, choices.

Typical of the author's many grievances is that pollution control efforts do not seem to reflect the fact that less than 3% of all cancer deaths are caused by pollution. In that vein, he estimates the cost of safety measures for major risk categories and the number of lives saved, giving the cost per life saved. Many claim that a price cannot be put on human life, but Bennett's point is not to put a monetary valuation on human life. Rather it is to show what categories of lives are most expensive to save.

The more complete the information available, the easier it is to make informed risk choices based on a cost/benefit analysis (I believe

[1] He cites, e.g., Andrew F. Fritzsche, *The Role of the Unconscious in the Perception of Risks*, 6 Risk 215 (1995).

citizens are obligated to make). How do we want to allocate resources? Costs are given for a variety of medical procedures such as heart transplants, hip replacements and lung transplants. Do we want to save "fire lives", "heart lives", "kidney lives" or "automobile lives"?

The book provides fatality rates for a variety of industries as well as loss of life expectancy (LLE) in days and compares them to the death rates from a variety of natural disasters such as floods, earthquakes and blizzards. Of interest was the author's categorization of poverty as a cause of death. The fact is that the impoverished have a shorter life span than the affluent due to many factors including stress, diet, lack of adequate health care and violence.

One shortcoming of the book is the apparent scope of its references. It seems to pay too little attention to mortality and other data available from governments outside of Canadian, as well as from the United Nations and other entities.

The book is rich in easy-to-read graphs and charts. One of its greatest strengths is that it simplifies what is necessary for a given study to be considered scientifically valid and provides information which allows readers, at least superficially, to evaluate future studies that purport to assess environmental risks.

If Bennett does no more than prod the electorate and policy makers into considering environmental risks less emotionally, he will have provided a great service.

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